

TETRASTICHUS DAVIDI SP. NOV. (HYMENOPTERA:
EULOPHIDAE) A PRIMARY PARASITOID ASSOCIATED WITH
EARIAS VITTELLA (FABRICIUS) (LEPIDOPTERA: NOCTUIDAE)
FROM INDIA¹

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(With ten text-figures)

The eulophid parasite *Tetrastichus davidi* sp. nov. is described from the material collected from the pupae of *Earias vittella* on cotton during January, 1985 from Padappai Tamil Nadu, India.

***Tetrastichus davidi** sp. nov.**
(Figs. 1-10)

FEMALE

Head: (Fig. 1) Dark blackish brown, reticulate sculpture, setose, wider than long in frontal aspect (0.64 mm: 0.51 mm), width of frons between eyes less than half of head width, fronto-vertex wide; ocelli arranged in obtuse angle triangle, eyes setose; subocular suture absent; mandible (Fig. 2) tridentate with sharp apices, maxillary and labial palpi one segmented each.

Antenna: (Fig. 3) Dark brown except scape white and pedicel on greater part light brown; densely setose on flagellum; scape cylindrical, more than four times longer than wide (0.26 mm: 0.06 mm); pedicel long, more than twice as long as wide (0.11 mm: 0.05 mm), shorter than first funicle segment, funicle with a ring segment, first funicle segment elongated, less than twice longer than wide (0.13 mm: 0.04 mm), second funicle segment a trifle longer

than wide (0.08 mm: 0.07 mm), third funicle segment greatly transverse, much wider than long (0.075 mm: 0.06 mm), club three segmented, longer than preceding two funicle segments combined.

Thorax: Dark blackish brown with bluish reflections, setose with fine reticulate sculpture, scutum wider than long, three pair of adnotaular bristles; scutellum shorter than scutum with fine longitudinal reticulations with two pair of long, strong setae; surface of propodeum shagreened, both median and lateral carinae present, propodeal spiracle not quite contiguous with anterior margin.

Fore wing: (Fig. 4) Hyaline, more than twice as long as wide; submarginal vein with three long, strong setae, costal cell broad with thirteen setae arranged in a row; marginal vein very long; stigmal vein (Fig. 5) less than $\frac{1}{4}$ as long as marginal vein; post marginal vein very short.

Hind wing: Hyaline, almost five times as long as wide.

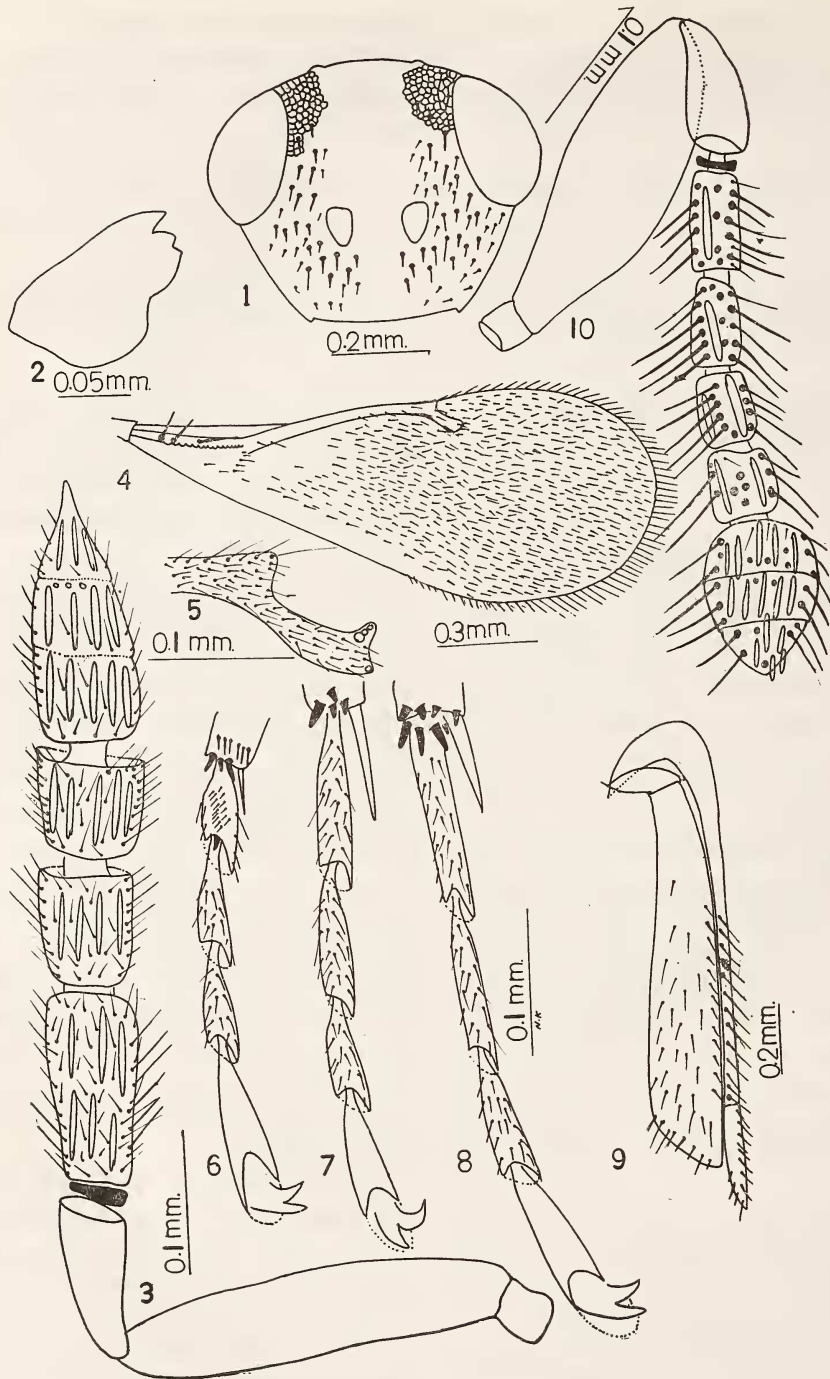
Fore leg: (Fig. 6) Yellowish except coxae and femora dark brown, densely setose, apex of coxa with three long, strong setae, apical rim of tibiae with a fine row of bristles, six in number arranged in a row, with three stout prominent pegs; tibial spur very short; part of the fore leg as shown in Fig. 6.

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* This species is named after Dr. B. V. David, Director, FIPPAT, Padappai-601 301, India.



Figs. 1-10. *Tetrastichus davidi* sp. nov.

1. Head, Frontal aspect, ♀; 2. Mandible, ♀; 3. Antenna, ♀; 4. Forewing, ♀;
5. Part of forewing Venation, ♀; 6. Part of Foreleg, ♀; 7. Part of middle leg, ♀;
8. Part of hind leg, ♀; 9. Ovipositor; 10. Antenna, ♂.

NEW DESCRIPTIONS

Middle leg: (Fig. 7) Uniformly yellowish except coxae at basal dorsal margin infuscated, uniformly densely setose; apex of coxae with a long bristle; apical rim of tibiae with four short, stout pegs, tibial spur shorter than basitarsus; part of the middle leg as shown in Fig. 7.

Hind leg: (Fig. 8) Uniformly yellowish except coxae at basal end infuscated, apex of coxa with four long bristles, apical rim of tibiae with eight stout pegs; tibial spur short; part of the hind leg as shown in Fig. 8.

Abdomen: Brown with yellowish bands, longer than thorax, uniformly setose, female genitalia as shown in fig, ovipositor slightly exerted.

Length of female: 1.75 mm (size varies from 1.35 mm to 1.80 mm in a series of specimen studied).

MALE

Resembles female except in the following characters.

Antenna: (Fig. 10) Uniformly yellowish except club dark brown or black, very densely setose; scape dilated, three times longer than wide; pedicel long, more than twice longer than wide, distinctly much longer than first funicle segment, funicle four segmented with a transverse ring, funicle segments elongated, decreasing in size distad except fourth funicle segment transverse; club three segmented, very stout, almost one and a half times longer than wide, longer than preceding two funicle segments combined.

Leg: Uniformly yellowish except fore coxae at basal half infuscated.

Length of male: 1.21 mm.

Material examined:

Holotype: Padappai, Tamil Nadu, India, 26-2-1985 reared from pupae of *Earias vittella* on cotton (D. Arul Samraj). Hym. Eulo. Nr. 1021.

Paratype: 8 ♀ ♀, 2 ♂ ♂ same data as holotype. Hym. Eulo. Nr. 1022 (D. A. Samraj). Material is being deposited in Z.S.I. Calcutta, India.

REMARKS

This species is remarkably different from all the known Indian species and comes closer to *Tetrastichus varicornis* (Girault) Burks, 1943 from which it can be distinguished by the following key characters.

- 1. Body black, part of scape, antennal club, middle and hind trochanters, bases and apices of femora and tibiae and basal segments of middle and hind tarsi white, antennal pedicel one eight longer than first funicle segment, club globose, as long as second and third funicle segments combined, submarginal vein of forewing with five dorsal bristles.
 *T. varicornis* (Girault) Burks
- Body dark blackish brown except abdomen with yellowish bands; Scape white; legs uniformly yellowish except fore coxae and femora completely brown, mid and hind coxae only infuscated at basal margins; pedicel shorter than first funicle segment, club with tapering at apex in female, in male it is globose (as shown in Fig. 10), distinctly longer than second and third funicle segments combined; submarginal vein of forewing with three dorsal bristles
 *T. davidi* sp. nov.

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REFERENCE

BURKS, B. D. (1943): The north American parasitic wasps of the genus *Tetrastichus* — A contribution to Biological control of Insect pests. *Proc. U.S. Nat. Mus.* 93: 505-608.